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| APPLICATION NO | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO | CONFIRMATION NO |
|----------------|-------------|----------------------|--------------------|-----------------|
| 09 392,947 | 09 09 1999 | STEPHEN JOE MYERS | H-204258 | 2048 |

7590 01 03 2002

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EXAMINER

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| ART UNIT | PAPER NUMBER |
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1764

DATE MAILED: 01 03 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/392,947

Applicant(s)

MYERS, STEPHEN JOE

Examiner

Hien Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-14 and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 09 September 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-14 in Paper No. 7 is acknowledged.
2. Applicant's cancellation of Group II, claims 15-22 in Paper No. 8 is acknowledged.

Drawings

3. The drawings are objected to because in Fig. 5 the reference numeral "20" does not have a lead line; also reference numerals 40 and 50 are pointed to the same mat. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the air inlet (claims 12, 13). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

On page 6, line 7, insert A3, line 5 --or opening -- should be inserted before "34" for consistency (note page 5, line 3).

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On page 7, line 6 --or annular ring-- should be inserted before "32" (note page 5, line 17).

Appropriate correction is required.

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 2-5, 12-13, 14, 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 3 it is unclear as to what is intended by "a first annular end portion of said catalyst" and where such is shown in the drawings.

In claim 12, it is unclear as to where the air inlet is disclosed in the specification and drawings. See claim 13 likewise.

In claim 14, it is unclear as to where it is disclosed in the specification and drawings. See claim 28 likewise.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3, 5-8, 10, 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaysert et al (4,043,761).

Gaysert et al discloses an exhaust system comprising: a catalyst 1'; a first end plate 9', positioned adjacent to a first end portion of said catalyst; a mat support 8, substantially covering said catalyst 1'; and a shell 7', having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst 1' and said mat support 8, and is disposed around and in intimate contact with at least a portion of said first end plate 9'.

Instant claims 1-3, 5-8, 10, 23-27 structurally read on the apparatus of Gaysert et al.

11. Claims 1-3, 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Frietzsche et al (3,854,888).

Frietzsche et al discloses an exhaust system comprising: a catalyst 2; a first end plate 8, positioned adjacent to a first end portion of said catalyst; a mat support 10, substantially covering said catalyst; and a shell 1, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 6-8 structurally read on the apparatus of Frietzsche et al.

12. Claims 1-3, 5-7, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiley (3,841,842).

Wiley discloses an exhaust system comprising: a catalyst; a first end plate 18, 20, positioned adjacent to a first end portion of said catalyst 11; a mat support 21, substantially

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covering said catalyst; and a shell 16, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 5-7, 10-11 structurally read on the apparatus of Wiley.

13. Claims 1-3, 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Musall et al (4,432,943).

Musall et al discloses an exhaust system comprising: a catalyst 7; a first end plate 11, positioned adjacent to a first end portion of said catalyst; a mat support 13, substantially covering said catalyst; and a shell 1, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 6-8 structurally read on the apparatus of Musall et al.

14. Claims 1-3, 5-8, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Santiago et al (4,155,980).

Santiago et al discloses an exhaust system comprising: a catalyst 1; a first end plate 5, positioned adjacent to a first end portion of said catalyst; a mat support 2, substantially covering said catalyst; and a shell 3, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 5-8, 10 structurally read on the apparatus of Santiago et al.

15. Claims 1-3, 5-8, 10, 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Langer (5,250,269).

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Langer discloses an exhaust system comprising: a catalyst 15; a first end plate 19, positioned adjacent to a first end portion of said catalyst; a mat support 16, 20, substantially covering said catalyst; and a shell 12, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 5-8, 10, 23-27 structurally read on the apparatus of Langer.

16. Claims 1-3, 5-8, 10, 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Foster (5,693,295).

Foster discloses an exhaust system comprising: a catalyst 122, 126, 130; a first end plate 114, positioned adjacent to a first end portion of said catalyst; a mat support 118, substantially covering said catalyst; and a shell 120, having a diameter greater than that of the first end plate wherein said shell is disposed around said catalyst and said mat support, and is disposed around and in intimate contact with at least a portion of said first end plate.

Instant claims 1-3, 5-8, 10, 23-27 structurally read on the apparatus of Foster.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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18. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 4, 9, 11-14, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Foster, Langer, Santiago et al, Musall et al, Wiley, Frieztzsche et al, or Gaysert et al in view of either Tadokoro et al (4,278,639) or Tamazawa et al (3,967,929) and either Hass (3,832,443) or Keith et al (3,441,381).

Tadokoro et al and Tamazawa et al disclose the conventionality of providing an air inlet through the shell and the mat.

Keith et al and Hass disclose the conventionality of providing a three-way catalyst.

Hass further discloses the conventionality of providing an air inlet through the end plate.

It would have been obvious to one having ordinary skill in the art to substitute the catalyst of either Keith et al and Hass for the catalyst of the primary references for the known and expected results of obtaining the same results in the absence of unexpected results.

It would have been obvious to one having ordinary skill in the art to add an air inlet in either position as taught by either Hass, Tadokoro et al or Tamazawa et al in the modified apparatus of the primary references for facilitating the oxidation of harmful pollutants in the exhaust gas by the catalyst.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the ring and the endplate in two pieces and welded together, since it has been held that forming in two pieces an article which has formerly been formed in one piece involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

It would have been obvious to one having ordinary skill in the art to extend the shell to halfway across the periphery since it has been held that where the general conditions of a claim are disclosed in the prior art, merely discovering the relative dimension involves only routine skill in the art. *In re Gardner v. TEC systems, Inc.* 725 F.2d 1338, 220 USPQ 777.

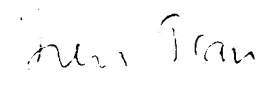
Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 308-4311. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT
December 31, 2001


HIEN TRAN
PRIMARY EXAMINER